THEORETICAL POPULATION BIOLOGY

AN INTERNATIONAL JOURNAL

EDITORS

C. C. Cockerham
S. Karlin
N. Keyfitz
T. Schoener

ASSOCIATE EDITORS

N. T. J. Bailey
W. F. Bodmer
L. L. Cavalli-Sforza
B. C. Clarke
M. Cody
D. Cohen
J. E. Cohen
J. F. Crow
K. Dietz
W. J. Ewens
J. Felsenstein
R. Ginsberg
D. Hartl
M. P. Hassell
W. G. Hill
J. M. Hoem
H. S. Horn
S. Hubbel
A. Jacquard
O. Kempthorne
M. Kimura
B. Latter
S. Levin
R. C. Lewontin
G. Malécot
C. Matessi
R. May
M. Nei
E. Nevo
S. Preston
T. Prout
A. Robertson
J. Roughgarden
J. Vandermeer
G. Watterson
E. O. Wilson

MANAGING EDITOR

M. Feldman

VOLUME 9 · 1976

ACADEMIC PRESS
New York and London
A Subsidiary of Harcourt Brace Jovanovich, Publishers

Copyright © 1976 by Academic Press, Inc.

All Rights Reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

Printed by the St. Catherine Press, Ltd., Bruges, Belgium

CONTENTS OF VOLUME 9

Number 1, February 1976

D. Serant. An Application of Kinship Process to the Gene Frequencies: Linkage Disequilibrium Due to Random Drift in Mendelian Genetics with Reversible Mutation and in Molecular Genetic 1

Michael E. Gilpin and Francisco J. Ayala. Schoener's Model and Drosophila Competition 12

J. R. Beddington and C. A. Free. Age Structure Effects in Predator-Prey Interactions 15

Robert W. Poole. Stochastic Difference Equation Predictors of Population Fluctuations 25

Prithwis Das Gupta. An Interactive Nonrandom-Mating Two-Sex Model Whose Intrinsic Growth Rate Lies between One-Sex Rates 46

Klaus Dietz. The Effect of Immigration on Genetic Control 58

Frank C. Hoppensteadt. A Slow Selection Analysis of Two Locus, Two Allele Traits 68

Paul A. Samuelson. Time Symmetry and Asymmetry in Population and Deterministic Dynamic Systems 82

A. J. Coale and D. R. McNeil. On the Asymptotic Trajectory of the Roots of Lotka's Equation 123

Erratum 128

Number 2, April 1976

Eric L. Charnov. Optimal Foraging, the Marginal Value Theorem . . 129

M. G. Bulmer. The Theory of Prey–Predator Oscillations 137

Jon Stene. A Model for Translocation Inheritance in Man, Segregation Patterns for a Single Centric-Fusion Translocation 151

Simon A. Levin and Robert M. May. A Note on Difference-Delay Equations 178

Frank M. Stewart. Variability in the Amount of Heterozygosity Maintained by Neutral Mutations 188

M. P. Hassell and H. N. Comins. Discrete Time Models for Two-Species Competition 202

John C. Turner. Calculation of Roots of Lotka's Equation 222

Marcus W. Feldman and L. L. Cavalli-Sforza. Cultural and Biological Evolutionary Processes, Selection for a Trait under Complex Transmission 238

Bengt Olle Bengtsson and Walter F. Bodmer. On the Increase of Chromosome Mutations under Random Mating 260
Ilan Eshel. On Survival Probabilities of Mutant Genes and the Evolution of Dominance 282

Number 3, June 1976

David G. Lloyd. The Transmission of Genes via Pollen and Ovules in Gynodioecious Angiosperms 299
Robert A. Armstrong and Richard McGehee. Coexistence of Species Competing for Shared Resources 317
Dorit Carmelli and L. L. Cavalli-Sforza. Some Models of Population Structure and Evolution 329
C. Matessi and S. D. Jayakar. Conditions for the Evolution of Altrusim under Darwinian Selection 360
Jonathan Roughgarden. Resource Partitioning among Competing Species—A Coevolutionary Approach 388
Dan Cohen. Selection within and between Heterogenetic Associations in Fungi 425

Author Index for Volume 9 429